

Claims

1. A method for determining the performance of decoding in a telecommunication system comprising a decoder and a testing apparatus for supplying test data to the decoder, the method comprising steps of
 - 5 generating test data comprising signalling data in a signalling frame format,
 - transmitting the test data mapped into two consecutive frames from the testing apparatus to the decoder for decoding,
 - decoding the signalling data from the received two test data frames,
 - 10 transmitting said decoded signalling data back to the testing apparatus encoded in one frame, and
 - determining the performance of decoding by comparing the transmitted signalling data and the received signalling data in the test apparatus.
2. A method according to claim 1, further comprising
 - 15 activating a traffic channel of the telecommunication system before transmitting the test data, and
 - transmitting the test data from the testing apparatus to the decoder in the downlink traffic channel and from the decoder to the testing apparatus in the uplink traffic channel.
- 20 3. A method according to claim 2, further comprising
 - transmitting the signalling data back to the testing apparatus in the first available uplink traffic channel time frames.
4. A method according to claim 2, further comprising
 - transmitting, prior to transmitting the test data, a message from the
 - 25 testing apparatus to activate a test loop in the decoder, which test loop is implemented in functional connection with the decoder and
 - acknowledging said message from the decoder to the testing apparatus, in response to the traffic channel being activated.
5. A method according to claim 4, wherein
 - 30 the message is a bit combination of CLOSE_TCH_LOOP_CMD message according to the GSM system.
6. A method according to claim 1, further comprising
 - determining the performance of channel decoding of RATSCCH frame in AMR half-rate speech channel.
- 35 7. A method according to claim 1, further comprising

14. A method according to claim 8, further comprising determining the performance of channel decoding of RATSCCH frame in AMR half-rate speech channel.

5 15. A method according to claim 8, further comprising determining the performance of channel decoding of SID_UPDATE frame in AMR half-rate speech channel.

16. A testing apparatus for determining the performance of a decoder, which testing apparatus is arranged to be functionally connected to the decoder, the testing apparatus comprising
10 a composing means for composing a test data comprising signalling data,

a transmitter for transmitting the test data mapped into two consecutive frames to the decoder for decoding,

a receiver for receiving the test data in one frame from the decoder,
15 said test data comprising the signalling data, and
a comparator determining the performance of decoding by comparing the transmitted signalling data and the received signalling data.

17. A testing apparatus according to claim 16, wherein the testing apparatus is arranged to
20 activate a traffic channel towards the decoder before transmitting the test data,
transmit the test data to the decoder in the downlink traffic channel,
and

receive the test data from the decoder in the uplink traffic channel.
25 18. A testing apparatus according to claim 17, wherein the testing apparatus is arranged to

transmit, prior to transmitting the test data, a message to the decoder to activate a test loop in the decoder, which test loop is implemented in functional connection with the decoder and

30 receive an acknowledgement of said message from the decoder, in response to the traffic channel being activated.

19. A testing apparatus for determining the performance of a decoder, which testing apparatus is arranged to be functionally connected to the decoder, the testing apparatus comprising

35 a composing means for composing test data comprising signalling data,

the mobile station further comprising a transmitter for transmitting said test data back to the testing apparatus.

1009628, 031502